Claims as now Presented in US Serial No. 10/115,943

Claims 1-28 (canceled).

Claim 29 (new): A method for inhibiting the production of reactive oxygen species in a mammalian patient produced by neurological diseases selected from the group consisting of Down's syndrome, Huntington's disease, brain trauma and epilepsy, chronic inflammatory demyelinating polyneuropathy, Guillain-Barré syndrome, myasthenia gravis, dermatomyositis, polymyositis, inclusion body myositis, post stroke, neurosarcoidosis, vascular dementia, closed head trauma, vasospasm, subarachnoid hemorrhage, adrenal leukocytic dystrophy, inclusion body dermatomyostis, minimal cognitive impairment and duchenne muscular dystrophy, which method comprises:

administering to said patient an aliquot of blood which has been treated *ex vivo* with at least two stressors selected from the group consisting of an oxidative environment, thermal stress and electromagnetic radiation;

wherein the concentration of the reactive oxygen species in said patient is reduced.

Claim 30 (new): The method of Claim 29, wherein the oxidative environment comprises applying an oxidizing agent to the aliquot.

Claim 31 (new): The method of Claim 30, wherein the oxidative environment contains ozone gas, and the ozone gas is introduced into the blood aliquot in an amount which does not give rise to excessive levels of cell damage.

Claim 32 (new): The method of Claim 30, wherein the oxidative environment comprises a mixture of ozone gas and medical grade oxygen, the ozone gas being contained in the mixture in a concentration of up to about 300 μg/ml.

Claim 33 (new): The method of Claim 32, wherein the ozone gas is contained in the mixture in a concentration of up to about 30 μg/ml.

Claim 34 (new): The method of Claim 33, wherein the ozone gas being contained in the mixture in a concentration of from about 13.5 μg/ml to about 15.5 μg/ml.

Claim 35 (new): The method of Claim 32, wherein the mixture is applied to the aliquot at a flow rate of up to about 0.33 liters/min.

Claim 36 (new): The method of Claim 35, wherein the mixture is applied to the aliquot at a flow rate of from about 0.21 liters/min to about 0.27 liters/min.

Claim 37 (new): The method of Claim 29, wherein the electromagnetic radiation comprises ultraviolet light having one or more UV-C band wavelengths.

Claim 38 (new): The method of Claim 29, wherein the thermal stressor is a temperature to which the aliquot is cooled or heated that does not result in substantial hemolysis of the blood in the aliquot.

Claim 39 (new): The method of Claim 29, wherein the thermal stressor is applied so that the temperature of at least part of the aliquot is in the range of from about -5°C to about 55°C.

Claim 40 (new): The method of Claim 29, wherein the thermal stressor provides for a mean temperature of the blood in the aliquot in the range of from about 37°C to about 44°C.

Claim 41 (new): The method of Claim 29, wherein the thermal stressor provides for a mean temperature of the blood in the aliquot is in the range of from about 0°C to about 36.5°C.

Claim 42 (new): The method of Claim 29, wherein the thermal stressor provides for a mean temperature of the blood in the aliquot is in the range of from about 10°C to about 30°C.

Claim 43 (new): The method of Claim 29, wherein the thermal stressor provides for a temperature is in the range of from about 37°C to about 55°C.

Claim 44 (new): The method of Claim 43, wherein the temperature is 42.5 ± 1°C.

Claim 45 (new): The method of Claim 29, wherein the aliquot has a volume of up to about 400 ml.

Claim 46 (new): The method of Claim 45, wherein the volume of the aliquot is about 10 ml.

Claim 47 (new): The method of Claim 45, wherein the volume of the aliquot is about 2 ml.

Claim 48 (new): The method of Claim 29, wherein the aliquot is subjected to the stressors for a period of up to about 60 minutes.

Claim 49 (new): The method of Claim 48, wherein the aliquot is subjected to the stressors for a period of about 3 minutes.

Claim 50 (new): The method of Claim 29, wherein the blood is administered to the mammal by a method suitable for vaccination selected from the group consisting of intra-arterial injection, intramuscular injection, intravenous injection, subcutaneous injection, intraperitoneal injection, and oral, nasal or rectal administration.

Claim 51 (new): The method of Claim 29, wherein all of the stressors are simultaneously administered to the aliquot.

Claim 52 (new): The method of Claim 51, wherein the mammal is a human.